

**Claim Amendments**

1. (Currently Amended) A method, comprising

determining a value for each feature in a group of features provided by a training data;

eliminating at least one feature with one of a minimum value and a maximum value from the group ~~based upon the value for each feature in the group;~~

~~updating the value for each feature in the group based on a part of the training data that corresponds to the eliminated feature;~~

retrieving a kernel data from a buffer;

subtracting a matrix from the kernel data to provide an updated kernel data,

each component of the matrix comprising a dot product of two of training samples

provided by at least a part of the training data that corresponds to the eliminated

feature;

updating the value for each feature of the group based on the updated kernel

data;

repeating of eliminating the at least one feature from the group and updating the value for each feature of the group until a number of features in the group reaches a predetermined value to generate a feature ranking list; and

recognizing a new data corresponding to the group of features with the feature ranking list.

2. (Original) The method of claim 1, wherein the training data further comprises a plurality of training samples, each of the training samples corresponding to the group of features.

3. (Original) The method of claim 1, wherein determining the value comprises:  
computing a kernel data based on the training data;  
computing the value for each feature of the group based on the kernel data; and  
storing the kernel data in a buffer.

4. (Original) The method of claim 3, wherein computing the kernel data further comprises computing a matrix as the kernel data, each component of the matrix comprising a dot product of two of training samples provided by the training data.

5-6. (Canceled)

7. (Original) The method of claim 1, wherein eliminating at least one feature comprises:  
computing a ranking criterion for each feature of the group based on the value for the each feature;  
eliminating the at least one feature with the minimum ranking criterion from the group; and

recording the eliminated feature in a feature ranking list.

8. (Canceled).

9. (Currently Amended) ~~An apparatus~~ A support vector machine, comprising:

a training logic to determine a value for each feature in a group of features provided by a training data; and

an eliminate logic to eliminate at least one feature with one of a minimum value and a maximum value from the group ~~based upon the value for each feature in the group~~,

wherein the training logic further ~~updates the value for each feature in the group based on a part of the training data that corresponds to the eliminated feature~~ comprises a buffer to store a kernel data, a kernel data logic to subtract a matrix from the kernel data to provide an updated kernel data, each component of the matrix comprising a dot product of two of training samples provided by at least a part of the training data that corresponds to the eliminated feature, and a value update logic to update the value based on the updated kernel data, and

wherein the apparatus further repeats eliminating the at least one feature from the group and updating the value for each feature of the group until a number of features in the group reaches a predetermined value, to generate a feature ranking list for a use of recognizing a new data corresponding to the group of features.

10. (Currently Amended) The ~~apparatus~~ support vector machine of claim 9, wherein the training data comprises a plurality of training samples, each of the training samples having the group of features.

11. (Currently Amended) The ~~apparatus~~ support vector machine of claim 9, further comprising:

a decision logic to decide whether to repeat the elimination of the at least one features from the group and update of the value for each feature of the group until a number of features in the group reaches a predetermined value.

12-14. (Canceled).

15. (Currently Amended) The ~~apparatus~~ support vector machine of claim 9, wherein the eliminate logic further comprises a ranking criterion logic to compute a ranking criterion for each feature of the group based on the value for the each feature.

16. (Currently Amended) The ~~apparatus~~ support vector machine of claim 9, wherein the eliminate logic further comprises a feature eliminate logic to eliminate the at least one feature having the minimum ranking criterion from the group.

17. (Currently Amended) A machine-readable medium comprising a plurality of instructions, that in response to being executed, result in a computing system:

determining a value for each feature in a group of features provided by a training data;

eliminating at least one feature with one of a minimum value and a maximum value from the group ~~based upon the value for each feature in the group;~~

~~updating the value for each feature in the group based on a part of the training data that corresponds to the eliminated feature;~~

retrieving a kernel data from a buffer;

subtracting a matrix from the kernel data to provide an updated kernel data,  
each component of the matrix comprising a dot product of two of training samples  
provided by at least a part of the training data that corresponds to the eliminated  
feature;

updating the value for each feature of the group based on the updated kernel  
data;

repeating of eliminating the at least one feature from the group and updating the value for each feature of the group until a number of features in the group reaches a predetermined value to generate a feature ranking list; ~~and~~

recognizing a new data corresponding to the group of features with the feature ranking list.

18. (Original) The machine-readable medium of claim 17, wherein the training data further comprises a plurality of training samples, each of the training samples corresponding to the group of features.

19. (Original) The machine-readable of claim 17, wherein the plurality of instructions that result in the computing system determining the value, further result in the computing system:

computing a kernel data based on the training data;

computing the value for each feature of the group based on the kernel data; and

storing the kernel data in a buffer.

20. (Original) The machine-readable of claim 19, wherein the plurality of instructions that result in the computing system computing the kernel data, further result in the computing system computing a matrix as the kernel data, each component of the matrix comprising a dot product of two of training samples provided by the training data.

21-22. (Canceled)

23. (Original) The machine-readable of claim 17, wherein the plurality of instructions that result in the computing system eliminating at least one feature, further result in the computing system:

    computing a ranking criterion for each feature of the group based on the value for the each feature;

    eliminating the at least feature with the minimum ranking criterion from the group; and

    recording the eliminated feature in a feature ranking list.

24. (Canceled).